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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/545,272	04/07/2000	Senthil Sivakumar	CISCO-1787	1978

7590 04/20/2004
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EXAMINER

MILLS, DONALD L

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 04/20/2004

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/545,272

Applicant(s)

SIVAKUMAR, SENTHIL

Examiner

Donald L Mills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 20, 2004 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (US 6,310,874 B1), hereinafter referred to as Miller, in view of Barkai et al. (US 6,188,691), hereinafter referred to as Barkai.

Regarding claims 1 and 9, Miller discloses a switch, which comprises *allowing broadcast flooding until a mapping of a MAC address to a port is performed by the bridge* (Referring to Figures 2 and 3, the switch "floods" the unit by transmitting the data unit through every switch port until the MAC address and corresponding ports are "learned." See column 3, lines 59-61

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and column 4, lines 35-40.) Miller does not disclose *the bridge connected to the plurality of networks and disallowing broadcast flooding after the mapping is achieved.*

Barkai teaches a switch connected to multiple networks (See Figure 1, column 4, lines 6-12.) Barkai teaches a method for maximizing network efficiency and reducing performance degradation by preventing flooding of traffic on all ports on all level 2 devices (See column 7, lines 16-18.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the flooding prevention method of Barkai in the switch of Miller. One of ordinary skill in the art would have been motivated to do so in order to maximize network efficiency by reducing excessive flooding of packets.

4. Claims 2-5 and ~~10~~-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (US 6,310,874 B1), hereinafter referred to as Miller, in view of Barkai et al. (US 6,188,691), hereinafter referred to as Barkai, in further view of Flanders et al (US 6,041,058), hereinafter referred to as Flanders.

Regarding claims 2 and 10 as explained above in the rejection statement of claims 1 and 9; Miller and Barkai disclose all the claim limitations of claims 1 and 9 (parent claims). Miller and Barkai do not disclose *wherein the allowing and disallowing of broadcast flooding is carried out for each MAC address independently.*

Flanders teaches a protocol type filters that are applied to all MAC unicast, multicast, and broadcast frames (See column 9, lines 2-4). Flanders further teaches that filtering can be employed to improve network operation (See column 1, lines 25-26.)

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the filtering technique of Flanders in the switch of Miller. One of ordinary skill in the art would have been motivated to do so in order to improve network operation by filtering repetitive frames.

Regarding claims 3 and 11 as explained above in the rejection statement of claims 1 and 9; Miller and Barkai disclose all the claim limitations of claims 1 and 9 (parent claims). Miller and Barkai do not disclose *wherein the bridge maintains a data structure to determine when to allow or disallow broadcast flooding*.

Flanders teaches protocol filters which are implemented via a protocol filter table 154 that contains a specification of whether to filter broadcast frames (See column 8, lines 66-67). Flanders further teaches that filtering can be employed to improve network operation (See column 1, lines 25-26.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the filter table of Flanders in the switch of Miller. One of ordinary skill in the art would have been motivated to do so in order to specify the filtering of broadcast frames to improve network operation.

Regarding claims 4 and 12 as explained above in the rejection statement of claims 1 and 9; Miller and Barkai disclose all the claim limitations of claims 1 and 9 (parent claims). Miller and Barkai do not disclose *wherein the data structure is a filter table*.

Flanders teaches protocol filters which are implemented via a protocol filter table 154 that contains a specification of whether to filter broadcast frames (See column 8, lines 66-67).

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Flanders further teaches that filtering can be employed to improve network operation (See column 1, lines 25-26.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the filter table of Flanders in the switch of Miller. One of ordinary skill in the art would have been motivated to so in order to specify the filtering of broadcast frames to improve network operation.

In regards to claims 5 and 13 as explained above in the rejection statement of claims 1 and 9, Miller and Barkai disclose all the claim limitations of claims 1 and 9 (parent claims). Miller and Barkai do not disclose *wherein the filter table contains MAC address information with associated flooding time period*.

Flanders teaches a counter that can be reset at predefined intervals, which tracks broadcast frames and compares the count against a threshold to determine whether the frame should be filtered (See column 9, lines 15-17). Flanders further teaches that filtering can be employed to improve network operation (See column 1, lines 25-26.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the filter table of Flanders in the switch of Miller. One of ordinary skill in the art would have been motivated to so in order to filter each frame at predefined intervals to improve network operation.

Response to Arguments

5. Applicant's arguments filed February 20, 2004 have been fully considered but they are not persuasive.

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Rejection Under 35 USC § 103

On page 5 of the remarks, regarding claims 1-5 and 9-13, Applicant argues that Miller and Barkai, individually or in combination, fail to teach, disclose or otherwise make obvious “allowing broadcast flooding until a mapping of a MAC address to a port is performed by the bridge.” Examiner respectfully disagrees. Miller discloses a switch that “floods” the unit by transmitting data through every switch port until the MAC address and corresponding ports are “learned” (See column 3, lines 59-61 and column 4, lines 35-40.) Therefore, Miller discloses “allowing broadcast flooding until a mapping of a MAC address to a port is performed by the bridge.”

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

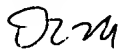
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Mills whose telephone number is 703-305-7869. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Donald L Mills



April 13, 2004



HASSAN KIZOU
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